

Having described the invention, the following is claimed:

1. A vehicle occupant protection system comprising:

seat belt webbing; and

a device coupled to the seat belt webbing for sensing tension in the seat belt webbing, the device being decoupled from the seat belt webbing in response to the tension in the seat belt webbing exceeding a predetermined threshold.

2. The vehicle occupant protection system of claim 1 wherein a loosely extending portion of the seat belt webbing extends in parallel to the device, when the device is coupled to the seat belt webbing, so that the loosely extending portion of the seat belt webbing is a non-load bearing portion of the seat belt webbing.

3. The vehicle occupant protection system of claim 2 wherein the loosely extending portion of the seat belt webbing is pulled taut and becomes a load bearing portion of the seat belt webbing in response to decoupling of the device from the seat belt webbing.

4. The vehicle occupant protection system of claim 3 further including an indication system for indicating that the device has been decoupled from the seat belt webbing.

5. The vehicle occupant protection system of claim 4 wherein the indication system includes an orientation sensor that is connected to the device, the orientation sensor providing a signal when the device tilts by at least a predetermined angle.

6. The vehicle occupant protection system of claim 1 wherein the device has opposite first and second ends, the first and second ends of the device being attached to first and second members, respectively, for coupling the device to the seat belt webbing, the first member being configured to release the first end of the device in response to the tension in the seat belt webbing exceeding the predetermined threshold.

7. The vehicle occupant protection system of claim 6 wherein the first member is a loop of material that is attached to the seat belt webbing, the loop of

material being configured to tear when the tension in the seat belt webbing exceeds the predetermined threshold.

8. A vehicle occupant protection system comprising:

seat belt webbing;
an anchor, the seat belt webbing being secured to the anchor, tension in the seat belt webbing being transferred to the anchor; and

a device for sensing tension in the seat belt webbing, the device including first and second attachment portions and a sensor portion that is interposed between the first and second attachment portions,

the first and second attachment portions of the device being secured to the seat belt webbing so that a portion of the seat belt webbing extends loosely between the first and second attachment portions, the device being subjected to the tension in the seat belt webbing, the sensor portion of the device sensing the tension and providing a tension signal indicative of the sensed tension.

9. The vehicle occupant protection system of claim 8 wherein the tension being transferred from the seat belt webbing to the anchor through the device bypasses the loosely extending portion of the seat belt webbing so that the loosely extending portion of the seat belt webbing is a non-load bearing portion of the seat belt webbing.

10. The vehicle occupant protection system of claim 9 wherein, upon the occurrence of a crash event, the first attachment portion of the device is released from the seat belt webbing and the loosely extending portion of the seat belt webbing becomes a load bearing portion of the seat belt webbing.

11. The vehicle occupant protection system of claim 10 further including an indication system for indicating that the first attachment portion of the device has been released from the seat belt webbing.

12. The vehicle occupant protection system of claim 11 wherein the indication system includes an orientation sensor that is connected to the device, the

orientation sensor providing a signal when the device tilts by at least a predetermined angle.

13. The vehicle occupant protection system of claim 8 wherein the first and second attachment portions of the device include structure enabling the device to be releasably attached to the seat belt webbing.

14. The vehicle occupant protection system of claim 13 wherein the structure of the first attachment portion includes a first plate having a first slot with a first opening leading to the first slot and wherein the structure of the second attachment portion includes a second plate having a second slot with a second opening leading to the second slot.

15. The vehicle occupant protection system of claim 14 wherein the seat belt webbing includes first and second loops, the first and second loops being spaced apart from one another, the first slot of the first attachment portion receiving the first loop and the second slot of the second attachment portion receiving the second loop.

16. The vehicle occupant protection system of claim 15 wherein the first loop is configured to tear when tension in the seat belt webbing exceeds a predetermined threshold so as to release the first attachment portion of the device from the seat belt webbing, when the first attachment portion of the device is released from the seat belt webbing, the loosely extending portion of the seat belt webbing being pulled taut and becoming a load bearing portion of the seat belt webbing.

17. The vehicle occupant protection system of claim 15 wherein the first attachment portion of the device includes a first member, the first member having a closed condition for closing the first opening and an open condition for enabling insertion of the first loop into the first slot through the first opening, the second attachment portion of the device including a second member, the second member having a closed condition for closing the second opening and an open condition for enabling insertion of the second loop into the second slot through the second opening.

18. The vehicle occupant protection system of claim 17 wherein at least one of the first and second members is a pivotal closure member.

19. The vehicle occupant protection system of claim 17 wherein at least one of the first and second members is a latch bolt mechanism.

20. The vehicle occupant protection system of claim 8 further including a tongue assembly and a buckle assembly for releasably securing the tongue assembly, the tongue assembly being attached to the seat belt webbing.

21. The vehicle occupant protection system of claim 8 further including a tongue assembly and a buckle assembly for releasably securing the tongue assembly, the buckle assembly being attached to the seat belt webbing, the tongue assembly being attached to another length of webbing.